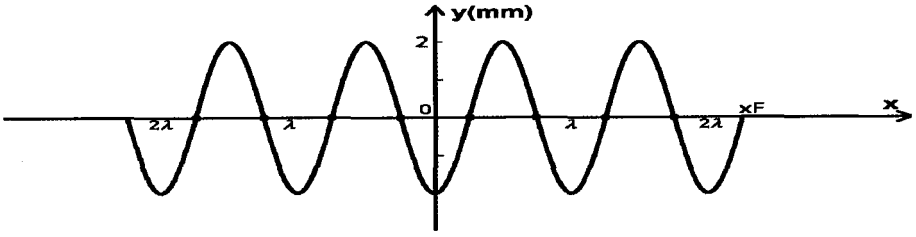
7) $x_F = v.t_2 = 0,6 \times 4,5.10^{-2} = 27.10^3 m$

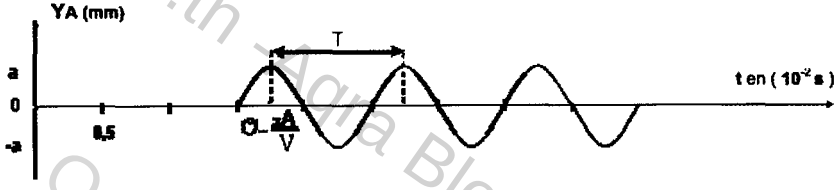
$\frac{x_F}{\lambda} = 2,25 \Rightarrow x_F = 2,25\lambda$



Remarque :

$t_2 - t_1 = 5.10^{-3} = \frac{T}{4}$ donc il suffit de translater la sinusoïde représentée à la date t_1 de $\frac{\lambda}{4}$ vers l'avant (dans le sens de propagation)

5



1) $T = 0,5 \times 2.10^{-2} = 10^{-2}$ S

$\theta = \frac{x_A}{V} \Rightarrow V = \frac{x_A}{\theta} = \frac{12.10^2}{1,5.10^{-2}} = 8m.s^{-1}$

$\lambda = V.T = 8.10^{-2} m$

2) $\begin{cases} y_A(t) = 0 & \text{si } t < \theta \\ y_A(t) = a \sin(\omega t + \varphi_A) & \text{si } t \geq \theta \end{cases}$

$a = 4.10^{-3} m$

$\omega = \frac{2\pi}{T} = 200\pi rad.s^{1}$

A $t = \theta \Rightarrow y_A = 0 \Rightarrow a \sin(\omega\theta + \varphi_A) = 0$

$\Rightarrow \sin(\omega\theta + \varphi_A) = 0$ ou $\Rightarrow \omega\theta + \varphi_A = \pi$

Qarray.tn - Aqra Blech- Qarray.tn